

CLAIMS

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1. A panel for an airbag of an automobile formed by integrally molding a cover body made of a synthetic resin with a main body made of another synthetic resin, the panel comprising:

a joint portion joined with the cover body provided around an opening portion formed in the main body,

wherein the joint portion constitutes an overlapping portion in which an outer peripheral edge of the cover body is overlapped as being arranged on the inner side of an opening edge of the main body.

2. The panel for an airbag according to claim 1, wherein the synthetic resin of the main body is a hard synthetic resin and the synthetic resin of the cover body is a soft synthetic resin.

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3. The panel for an airbag according to claim 1, wherein a concavo-convex portion having a serrate shape or a downward convex shape is formed on a lower face of the main body in the overlapping portion.

4. The panel for an airbag according to claim 1, wherein the main body and the cover body are joined in the overlapping portion by high frequency induction heating and vibration melt-bonding.

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5. The panel for an airbag according to claim 1, wherein a groove portion having a closed curve shape is formed in a boundary portion of an end portion of the opening portion of

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the main body in the cover body, and a thin wall portion which ruptures and a non-thin wall portion which does not rupture at operating time of the airbag are formed along the groove portion in the cover body in a single line shape or a shape of plural continuous lines.

6. The panel for an airbag according to claim 5, wherein the non-thin wall portion is formed into a shape of one transversal line on an upper or lower side of the cover body, and the thin wall portion is formed in a quadrilateral shape with one side opened along a groove portion in three directions except for the line forming the non-thin wall portion.

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7. The panel for an airbag according to claim 5, wherein the non-thin wall portion is formed into a shape of one transversal line on an upper or lower side of the cover body and the thin wall portion is formed along an entire periphery of the groove portion such that a line forming the non-thin wall portion is included in an inner side.

8. The panel for an airbag according to claim 5,
wherein the non-thin wall portion can be formed into a shape of one transversal line on each of upper and lower sides of the cover body, and the thin wall portion is formed into a shape of one longitudinal line on each of left-hand and right-hand sides of the cover body;

wherein a second thin wall portion which is not formed along a groove portion is formed into a shape of one transversal line in a central portion of the cover body; and

wherein the entire of the first and second thin wall portions can be formed in an H-shape.

9. The panel according for an airbag to claim 5,
wherein the non-thin wall portion is formed into a shape of one transversal line on each of upper and lower sides of the cover body, and the thin wall portion is formed along an entire periphery of a groove portion such that a line forming the non-thin wall portion is included in an inner side;

wherein a second thin wall portion which is not formed along the groove portion is formed into a shape of one transversal line in a central portion of the cover body; and

wherein the entire of the first and second thin wall portions is formed in a shape in which two quadrilaterals are lined up.

10. The panel for an airbag according to claim 5,
wherein the non-thin wall portion can be formed into a shape of one longitudinal line on each of left-hand and right-hand sides of the cover body, and the thin wall portion is formed into a shape of one transversal line on each of upper and lower sides of the cover body;

wherein a second thin wall portion which is not formed along a groove portion is formed into a shape of one longitudinal line in a central portion of the cover; and

wherein the entire of the first and second thin wall portions is formed in an H-shape.

11. The panel for an airbag according to claim 5,

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wherein the non-thin wall portion can be formed into a shape of one longitudinal line on each of left-hand and right-hand sides of the cover body, and the thin wall portion is formed along an entire periphery of a groove portion such that a line forming the non-thin portion is included with an inner side;

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wherein a second thin wall portion is not formed along the groove portion but is formed into a shape of one longitudinal line in a central portion of the cover body; and

wherein the entire of the first and second thin wall portions is formed in a shape in which two quadrilaterals are lined up.

12. The panel for an airbag according to claim 5, wherein a rib is projected in the non-thin wall portion and connected to the airbag case through a connecting member.

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13. The panel according to claim 1, wherein an opening edge of the opening portion of the main body is mechanically connected to an outer peripheral edge of the cover body.

14. A panel for an airbag of an automobile including:
a cover body comprising a first synthetic resin material;
a main body comprising a second synthetic resin material compatible with the first synthetic resin material, formed by two-color molding after forming the cover body; and
a deformation restricting portion provided at the outer peripheral edge of the cover body and engaged with a mold face,
wherein the main body comprises an opening portion which

is closed by the cover body; and

wherein the deformation restricting portion restricts deformation of the cover body caused by a molding pressure which acts at a molding time of the main body.

15. The panel for an airbag according to claim 14, wherein the deformation restricting portion is constituted of a convex strip having an angular cross section or a concave groove.

16. A panel for an airbag of an automobile including:

a main body which has an opening portion comprising a first synthetic resin material;

a cover body comprising a second synthetic resin material compatible with the first synthetic resin material, formed by two-color molding after forming the main body; and

a deformation restricting portion provided at the periphery of the opening portion and engaged with a mold face,

wherein the opening portion of the main body comprises is closed by the cover body; and

wherein the deformation restricting portion restricts deformation of the cover body caused by a molding pressure which acts at a molding time of the main body.

17. The panel for an airbag according to claim 16, wherein the deformation restricting portion is a convex strip having an angular cross section or a concave groove.

18. A panel for an airbag of an automobile formed by integrally molding a cover body made of a synthetic resin with a main body made of another synthetic resin and providing a

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thin wall portion which ruptures when the airbag is operated;

wherein the main body and the cover body are integrally molded by one-color molding;

wherein a crack preventing layer is provided on a rear surface of a general portion which is a portion except for the thin wall portion of the cover body ; and

wherein the crack preventing layer prevents cracks of the general portion.

19. The panel for an airbag according to claim 5,
wherein a rib is projected in the cover body on the rear face of a portion in which no thin wall portion is formed; and
wherein a connecting member made of a metal and extending from a side of the main body is connected to the rib, and a projection is formed on a surface of this connecting member and is bitten into a surface of the rib when the connecting member is connected to the rib.

20. A method for producing a panel for an airbag of an automobile formed by integrally molding a cover body made of a synthetic resin with a main body made of another synthetic resin, the method comprising:

preparing a thermoplastic material having compatibility as the synthetic resin forming each of the main body and the cover body;

arranging a movable core in a male or female die as a mold;

interrupting a portion between a first cavity portion

for forming a first member and a second cavity portion for forming a second member by allowing the core to project and contact an opposite die;

injecting a material of the first member into the first cavity portion;

forming a communicating portion between the first and second cavity portions by retreating the core; and

injecting a material of the second member into the second cavity portion and the communicating portion so that an overlapping portion of both the first and second members is formed and adhered and both the first and second members are integrally made.

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